[0048] For example, assuming that a person is interested in selecting "3. Loan Account" (count=3), the person may start at reference point **160** and slide a finger past the first two touch points **170**-A and **170**-B (while feeling the different sensation and thus recognizing the points). When the third (equaling count) touch point is reached, the corresponding exit **180**-C is used to select touch button **190**-C. Thus, by using guide **150**, a person may conveniently select a desired choice without having to rely on visual sense.

[0049] Various modification and/or enhancements may be provided to the approach described above. For example, a single touch of a touch button may cause the corresponding menu choice to be read out, and a second touch (or sustained placement) may cause the option to be selected.

[0050] The selection apparatus thus provided may be used in several types of transaction systems. Examples of such systems include, but not limited to, ATM machines, online check-in counters at the air ports, ticket vending kiosks, kiosks used for displaying product information, etc. The manner in which such systems may be implemented is described below with an example.

[0051] 4. Example System

[0052] **FIG. 2** is a block diagram illustrating an example system in which the present invention can be implemented. The system is shown containing selection apparatus **210**, display controller **230**, processing unit **250**, audio controller **270** and speaker **290**. Each block is described in further detail below.

[0053] Selection apparatus **210** may be implemented using portion **100**. Accordingly, selection apparatus **210** may be designed to receive (from display controller **230**) display signals representing image frames containing multiple choices, and to display the image frames. In addition, when a user touches touch area **130**, selection apparatus **210** sends digits (e.g., coordinates of the touch area or some other number which enables the touched point to be identified with the corresponding touch button) representing the area when the touch has been sensed.

[0054] Display controller **230** receives data (from processing unit **250**) representing the content of image frames to be generated on selection apparatus **210**, and generates display signals (for display in the display area of selection apparatus **210**) based on the received data. Audio controller **270** receives data (from processing unit **250**) representing the sounds to be generated using speaker **290**, and generates the corresponding electrical signals to speaker **290**. Display controller **230**, audio controller **270** and speaker **290** may be implemented in a known way.

[0055] Processing unit **250** generates data containing various image frames to be displayed in the display area of selection apparatus **210**. In general, the layout of the content of each image frame needs to take into account the specific locations at which the touch points are present, and other aspects of the user interface desired to be presented. The generated data is sent to display controller **230**.

[0056] Processing unit **250** receives from selection apparatus **210** data representing the area touched by a user. In response, processing unit **250** coordinates and controls the operation of display controller **230** and audio controller **270** to generate images and sounds, for example, as described in the sections above. In general, processing unit **250** and display controller **230** contain processors which are implemented using hardware structures executing instructions (software, firmware, etc.) to provide various features of the present invention.

[0057] 5. Conclusion

[0058] While various embodiments of the present invention have been described above, it should be understood that they have been presented by way of example only, and not limitation. Thus, the breadth and scope of the present invention should not be limited by any of the above described exemplary embodiments, but should be defined only in accordance with the following claims and their equivalents.

What is claimed is:

1. A system comprising:

a touch screen containing a plurality of touch buttons;

a guide structure to lead an object along a plurality of touch points, wherein said plurality of touch points provide a different sensation when a person guides an object along said guide structure, each of said plurality of touch points corresponding to a corresponding one of said plurality of touch buttons; and

a processor to cause a plurality of choices to be displayed on said touch screen, wherein each of said plurality of choices is displayed associated with a corresponding one of said plurality of touch buttons,

wherein a person can slide a finger along said guide structure to determine a touch button corresponding to a desired choice by sliding along said guide structure.

2. The system of claim 1, further comprising a plurality of exits, wherein each of said plurality of exits is designed to lead said object from a corresponding touch point to a corresponding touch button, whereby said person can identify a location corresponding to a touch button by first identifying a touch point based on said different sensation and then use the corresponding exit to locate the corresponding touch button.

3. The system of claim 2, wherein said guide structure further comprises a reference point, and wherein said system further comprises a speaker to read out said plurality of choices, each of said plurality of choices being associated with a number which represents a number of touch buttons a corresponding choice is located from said reference point.

4. The system of claim 3, wherein said guide structure is contained in a border surrounding said touch system, and wherein said touch points are also contained in said touch structure.

5. The system of claim 2, wherein said guide structure comprises a groove and each of said plurality of touch points comprises a bump in said groove.

6. The system of claim 5, wherein each of said plurality of exits opens said groove at a touch point to a corresponding touch button.

7. The system of claim 2, wherein said guide structure comprises a projected structure and each of said plurality of touch points comprises a depression.

8. The system of claim 2, wherein said touch screen comprises:

a display area for displaying said plurality of choices; and

a touch area containing said touch buttons.